

Recent papers by IBM authors

The information listed here is supplied by the Institute for Scientific Information. Reprints of the papers may be obtained by writing directly to the first author cited.

• Papers are listed alphabetically by author.

A

M. O. Aboelfotoh and K. N. Tu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Schottky-Barrier Heights of Ti and TiSi₂ on n-Type and p-Type Si(100)**, *Physical Review B* **34**, No. 4, 2311-2318 (1986).

P. S. Alexopoulos and R. H. Geiss (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Micromagnetic and Structural Studies of Sputtered Thin-Film Recording Media**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 566-569 (1986).

M. Arienzo, A. C. Megdanis, P. E. Sackles, and A. E. Michel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **In Situ Arsenic Doped Polysilicon for VLSI Applications**, *IEEE Transactions on Electron Devices* **ED-33**, No. 10, 1535-1538 (1986).

T. C. Arnoldussen and H. C. Tong (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Zigzag Transition Profiles, Noise, and Correlation Statistics in Highly Oriented Longitudinal Film Media**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 889-891 (1986).

B

A. I. Baise (IBM Corporation, East Fishkill facility, Hopewell Junction, NY 12533), **Optimizing Polyimide Cure Using Infrared Spectroscopy and a Factorial Design**, *Journal of Applied Polymer Science* **32**, No. 3, 4043-4048 (1986).

M. Baumberger, E. Stoll, and K. H. Rieder (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Atom Diffraction from Soft Periodic Scattering Potentials: Calculation of Diffraction Intensities by an Extended GR Method**, *Physical Review B* **34**, No. 2, 792-796 (1986).

I. A. Beardsley (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Modeling the Record Process**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 454-459 (1986).

I. A. Beardsley (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Three Dimensional Write Model for Magnetic Recording**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 361-363 (1986).

R. T. Beaty (IBM United Kingdom Ltd., Strathclyde PA16 0AH, England), **Evolution Towards Automation**, *IEE Proceedings A* **133**, No. 6, 332 (1986).

J. G. Bednorz and K. A. Müller (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Possible High T_c Superconductivity in the Ba-La-Cu-O System**, *Zeitschrift für Physik B* **64**, No. 2, 189-193 (1986).

Y. Benari and S. Gal (IBM Israel, Haifa, Israel), **Optimal Replacement Policy for Multicomponent Systems: An Application to a Daily Herd**, *European Journal of Operational Research* **23**, No. 2, 213-221 (1986).

C. H. Bennett (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **On the Nature and Origin of Complexity in Discrete, Homogeneous, Locally-Interacting Systems**, *Foundations of Physics* **16**, No. 6, 585-592 (1986).

R. Benzi (IBM Corporation, Via Giorgione 129, Rome, Italy), P. Malguzzi, A. Speranza (European Center for Medium Range Weather Forecasts, Reading, England), and A. Sutera (CNR, Bologna, Italy), **The Statistical Properties of General Atmospheric Circulation: Observational Evidence and a Minimal Theory of Bimodality**, *Quarterly Journal of the Royal Meteorological Society* **112**, No. 473, 661-674 (1986).

G. L. Best, D. E. Horne, A. Chiou, and H. Sussner (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Precise Optical Measurement of Slider Dynamics**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 1017-1018 (1986).

K. W. Blazey (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), T. L. Estle, S. L. Rudaz (Rice University, Houston, TX), E. Holzschuh, W. Kündig, and B. D. Patterson (Universität Zürich, Zurich,

Switzerland), **Double Electron-Muon Resonance of Anomalous Muonium in Silicon**, *Physical Review B* **34**, No. 3, 1422-1429 (1986).

K. W. Blazey (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and F. Levy (Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland), **EPR of Rhodium, Osmium and Iridium-Doped Rutile**, *Solid State Communications* **59**, No. 6, 335-338 (1986).

R. M. Bolle and D. B. Cooper (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **On Optimally Combining Pieces of Information, with Application to Estimating 3-D Complex-Object Position from Range Data**, *IEEE Transactions on Pattern Analysis and Machine Intelligence PAMI-8*, No. 5, 619-638 (1986).

J. T. Borenstein, J. T. Jones, J. W. Corbett (State University of New York, Albany, NY 12222), G. S. Oehrlein (IBM, Yorktown Heights, NY), and R. L. Kleinhenz (IBM, Hopewell Junction, NY), **Quenched-in Defects in Flashlamp-Annealed Silicon**, *Applied Physics Letters* **49**, No. 4, 199-200 (1986).

G. Bouchard and F. E. Talke (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Non-Repeatable Flutter of Magnetic Recording Disks**, *IEEE Transactions on Magnetics MAG-22*, No. 5, 1019-1021 (1986).

F. Bozso and P. Avouris (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Reaction of Si(100) with NH₃: Rate-Limiting Steps and Reactivity Enhancement via Electronic Excitation**, *Physical Review Letters* **57**, No. 9, 1185-1188 (1986).

I. F. Brackenbury (IBM United Kingdom, Scientific Center, Winchester, England), **Parallel Processing Computers for the Fifth Generation**, *Physics in Technology* **17**, No. 4, 174 (1986).

L. M. Branscomb (IBM Corporation, Old Orchard Road, Armonk, NY 10504), **A Federal Department of Science and Technology: The Case For and Against**, *Technology in Society* **8**, No. 1-2, 65-75 (1986).

B. Braren and D. Seeger (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Low-Temperature UV Laser Etching of PMMA: On the Mechanism of Ablative Photodecomposition**, *Journal of Polymer Science, Polymer Letters* **24**, No. 8, 371-376 (1986).

A. A. Bright and J. T. Wetzel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Resistivity of AuIn₂ Thin Films**, *Journal of Applied Physics* **60**, No. 6, 2041-2045 (1986).

L. J. Brillson, M. L. Slade, R. E. Viturro (Xerox Corporation, Webster Research Center, Webster, NY 14580), M. K. Kelly, N. Tache, G. Maragitondo (University of Wisconsin, Madison), J. M. Woodall, P. D. Kirchner, G. D. Pettit, and S. L. Wright (IBM, Yorktown Heights, NY), **Fermi Level Pinning and Chemical Interactions at Metal-In₂Ga_{1-x}As(100) Interfaces**, *Journal of Vacuum Science and Technology B* **4**, No. 4, 919-923 (1986).

R. F. Broom, H. P. Meier, and W. Walter (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Doping Dependence of the Schottky-Barrier Height of Ti-Pt Contacts to n-Gallium Arsenide**, *Journal of Applied Physics* **60**, No. 5, 1832-1833 (1986).

C. R. Brundle (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Surface Analysis for Materials Technology within a Computer Industry**, *Fresenius Zeitschrift für Analytische Chemie* **324**, No. 5, 426-436 (1986).

L. P. Buchwalter (IBM Corporation, Rt. 52, East Fishkill, NY 12533) and J. Greenblatt (Tadiran Corporation, Holon, Israel), **An XPS Study of the Locus of Failure Between PMDA-ODA Polyimide and SiO₂ Surface**, *Journal of Adhesion* **19**, No. 3-4, 257-265 (1986).

D. M. Burland (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Holographic Method for Investigating Solid-State Photochemistry**, *IEEE Journal of Quantum Electronics QE-22*, No. 8, 1469-1475 (1986).

C

B. Cannon, T. S. Gardner, and D. K. Cohen (IBM Corporation, Tucson, AZ 85744), **Measurement of 1-μm Diam Beams**, *Applied Optics* **25**, No. 17, 2981-2983 (1986).

M. A. Champion and M. M. Mitchell (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709), **Management Turnover: Experiential Differences Between Former and Current Managers**, *Perception & Psychophysics* **39**, No. 1, 57-69 (1986).

C.-A. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Interactions Between Au and Cu Across a Ni Barrier Layer**, *Journal of Applied Physics* **60**, No. 3, 1220-1222 (1986).

M. Chen, K. A. Rubin, and R. W. Barton (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Compound Materials for Reversible, Phase-Change Optical Data Storage**, *Applied Physics Letters* **49**, No. 9, 502-504 (1986).

R. T. Collins (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), K. v. Klitzing, and K. Ploog (Max-Planck-Institut für Festkörperforschung, Stuttgart, Federal Republic of Germany), **Photoexcited Transport in GaAs/AlAs Quantum Wells**, *Applied Physics Letters* **49**, No. 7, 406-408 (1986).

J. P. Collman, J. T. McDevitt, G. T. Yee, M. B. Zisk (Stanford University, Stanford, CA 94305), J. B. Torrance (IBM, San Jose, CA), and W. A. Little (Stanford University, CA), **Optical and Conductive Properties of Pyrazine-Bridged Iron, Ruthenium and Osmium Octaethylporphyrin Coordination Polymers**, *Synthetic Metals* **15**, No. 2/3, 129-140 (1986).

D. Coppersmith (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Another Birthday Attack**, *Lectures on Computer Science* **218**, 14-17 (1986).

D. Coppersmith (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Cheating at Mental Poker**, *Lectures on Computer Science* **218**, 104-107 (1986).

D. Coppersmith (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Real Reason for Rivest's Phenomenon**, *Lectures on Computer Science* **218**, 535-536 (1986).

H. Coufal (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Photothermal Spectroscopy: Applications in Surface Sciences and in Chemical Analysis**, *Fresenius Zeitschrift für Analytische Chemie* **324**, No. 5, 456-462 (1986).

D

J. E. Demuth, R. Imbihl, and W. A. Thompson (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Temperature-Dependent Electronic Excitations of the Ge(111)-2×1 Surface**, *Physical Review B* **34**, No. 2, 1330-1332 (1986).

D. J. DiMaria (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. R. Abernathy (IBM, Essex Junction, VT), **Electron Heating in Silicon Nitride and Silicon Oxynitride Films**, *Journal of Applied Physics* **60**, No. 5, 1727-1729 (1986).

D. J. DiMaria, M. V. Fischetti, M. Arienzo, and E. Tierney (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electron Heating Studies in Silicon Dioxide: Low Fields and Thick Films**, *Journal of Applied Physics* **60**, No. 5, 1719-1726 (1986).

N. J. DiNardo (Drexel University, Philadelphia, PA 19104), W. A. Thompson, A. J. Schellsookin, and J. E. Demuth (IBM, Yorktown Heights, NY), **Polarization Dependence of Si(111)-2×1 Surface-Phonon and Surface-State Excitations**, *Physical Review B* **34**, No. 4, 3007-3010 (1986).

C. W. Dirk, R. J. Twieg (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and G. Wagniere (University of Zurich, Switzerland), **The Contribution of π -Electrons to Second Harmonic Generation in Organic Molecules**, *Journal of the American Chemical Society* **108**, No. 18, 5387-5397 (1986).

D. P. DiVincenzo (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Perfect and Imperfect Icosahedral Solids and the Projection Method**, *Journal d'Physique* **47**, No. C-3, 237-243 (1986).

E

M. Eizenberg, D. A. Smith, M. Heiblum, and A. Segmüller (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electron Beam Evaporation of Oriented Nb Films onto GaAs Crystals in Ultrahigh Vacuum**, *Applied Physics Letters* **49**, No. 7, 422-424 (1986).

B. G. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A New Look at Density Waves and Star Formation**, *Physica Scripta* **T11**, 48-52 (1986).

M. Enomoto (National Research Institute for Metals, 1-2-1 Sengen, Sakuramura, Ibaraki 305, Japan), W. F. Lange III (IBM, Boulder, CO), and H. I. Aaronson (Carnegie-Mellon University, Pittsburgh, PA), **The Kinetics of Ferrite Nucleation at Austenite Grain Edges in Fe-C and Fe-C-X Alloys**, *Metallurgical Transactions A* **17**, No. 8, 1399-1407 (1986).

O. Entin-Wohlman, C. Hartzstein (Tel Aviv University, Ramat Aviv, 69978 Tel Aviv, Israel), and Y. Imry (IBM, Yorktown Heights, NY), **Quantum Oscillations in the Magnetotransport of a Finite Two-Dimensional Anderson Model**, *Physical Review B* **34**, No. 2, 921-926 (1986).

A. Erbil, W. Weber, G. S. Cargill III, and R. F. Boehme (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Lattice Distortions for Arsenic in Single-Crystal Silicon**, *Physical Review B* **34**, No. 2, 1392-1394 (1986).

F. Ercolessi, E. Tosatti (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), and M. Parrinell (University of Trieste, Italy), **Au(100) Surface Reconstruction**, *Physical Review Letters* **57**, No. 6, 719-722 (1986).

L. Esaki (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Bird's-Eye View on the Evolution of Semiconductors, Superlattices and Quantum Wells**, *IEEE Journal of Quantum Electronics* **QE-22**, No. 9, 1611-1624 (1986).

L. F. Escudero (IBM Spain, 4 Catellana, E-28046 Madrid, Spain), **Performance Evaluation of Independent Superbasic Sets on Nonlinear Replicated Networks**, *European Journal of Operational Research* **23**, No. 3, 343-355 (1986).

F

E. B. Feder (Tenneco Oil Co., Houston, TX) and J. Kelly (IBM, Houston, TX), **Education and Economic Impact: The Human Processing Model**, *Education* **106**, No. 3, 281-297 (1986).

B. I. Finkelstein and E. R. Christensen (IBM Corporation, Tucson, AZ 85744), **Signal-to-Noise Ratio Models for High-Density Recording**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 898-900 (1986).

G

R. J. Gambino, T. R. McGuire, T. S. Plaskett, and W. Reim (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Composition and Wavelength Dependence of the Faraday Rotation of Amorphous Gadolinium Alloys**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 1227-1229 (1986).

P. Gas, V. Deline, F. M. d'Heurle, A. Michel, and G. Scilla (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Boron, Phosphorus, and Arsenic Diffusion in TiSi_2** , *Journal of Applied Physics* **60**, No. 5, 1634-1639 (1986).

M. Gijs (Catholic University of Leuven, B-3030 Heverle, Belgium), C. Van Haesendonck (IBM, Yorktown Heights, NY), and Y. Bruynseraede (Catholic University of Leuven, Belgium), **Electron Localization and Interaction Effects in Quasi-Two-Dimensional Mg Films**, *Journal of Physics F* **16**, No. 9, 1227-1238 (1986).

G. C. Gobbi, W. W. Fleming, R. Sooriyakumaran, and R. D. Miller (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Variable-Temperature ^{13}C and Si_{29} CPMAS NMR-Studies of Poly(Di-Normal-Hesylsilane)**, *Journal of the American Chemical Society* **108**, No. 18, 5624-5626 (1986).

R. E. Gomory (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Trends in Computers**, *Journal of Operational Research* **26**, No. 3, 330-340 (1986).

H. Guggen, M. Jurich, J. D. Swalen (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and A. J. Sievers (Max-Planck-Institut für Festkörperforschung, Stuttgart, Federal Republic of Germany), **Reply to "Comment on 'Observation of an Index-of-Refraction-Induced Change in the Drude Parameters of Ag Films'"**, *Physical Review B* **34**, No. 2, 1322-1324 (1986).

H

J. J. Hack (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Peak vs Sustained Performance in Highly Concurrent Vector Machines**, *Computer* **19**, No. 9, 11-19 (1986).

W. A. Harrison and J. Tersoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Tight-Binding Theory of Heterojunction Band Lineups and Interface Dipoles**, *Journal of Vacuum Science and Technology B* **4**, No. 4, 1068-1073 (1986).

E. W. Hearn, D. J. Werner, and D. A. Doney (IBM Corporation, East Fishkill facility, Hopewell Junction, NY 12533), **Film-Induced Stress Model**, *Journal of the Electrochemical Society* **133**, No. 8, 1749-1751 (1986).

P. Hedergård and F. U. Hillebrecht (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Edge Effects in Auger Spectroscopy for the Early Transition Metals**, *Physical Review B* **34**, No. 4, 3045-3048 (1986).

M. Heiblum, I. M. Anderson, C. M. Knoedler (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **dc Performance of Ballistic Tunneling Hot-Electron Transfer Amplifiers**, *Applied Physics Letters* **49**, No. 4, 207-209 (1986).

D. A. Herman, Jr. and B. E. Argyle (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Magneto-Optic Observation of Domain Motions and Instabilities in Small Permalloy Elements**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 772-774 (1986).

J. H. Hester, D. S. Hirschberg (University of California at Irvine, Irvine, CA 92717), S.-H. Huang (University of Houston, Houston, TX), and C. K. Wong (IBM, Yorktown Heights, NY), **Faster Construction of Optimal Binary Split Trees**, *Journal of Algorithms* **7**, No. 3, 412-424 (1986).

T. W. Hickmott (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Fractional Quantization in ac Conductance of $\text{Al}_x\text{Ga}_{1-x}\text{As}$ Capacitors**, *Physical Review Letters* **57**, No. 6, 751-754 (1986).

A. M. Homola, M. R. Lorenz (IBM Corporation, 650 Harry Road, San Jose, CA 95120), C. J. Mastrang, and T. L. Tilbury (IBM, San Jose, CA), **Novel Magnetic Dispersions Using Silica Stabilized Particles**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 716-719 (1986).

K. Horn, K. H. Frank, J. A. Wilder (Max-Planck-Gesellschaft, 1000 Berlin 33, Federal Republic of Germany), and B. Reihl (IBM, Rüschlikon, Switzerland), **Observations of Final State Screening in Inverse Photoemission from Adsorbed Xenon Layers**, *Physical Review Letters* **57**, No. 8, 1064-1067 (1986).

T. D. Howell, P. Kasiraj, J. S. Best, F. Chu, and M. M. Yerry (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Study of Disk Noise Statistics**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 901-903 (1986).

G. Hughes and R. Ludeke (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **O Is Studies of the Oxidation of InP(110) and GaAs(110) Surfaces**, *Journal of Vacuum Science and Technology B* **4**, No. 4, 1109-1114 (1986).

G. Hughes, R. Ludeke, F. Schaffler, and D. Rieger (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Transition Metals on GaAs(110): A Case for Extrinsic Surface States**, *Journal of Vacuum Science and Technology B* **4**, No. 4, 924-930 (1986).

I

R. Imbihl and J. E. Demuth (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Adsorption of Oxygen on a Pd(111) Surface Studied by High Resolution Electron Energy Loss Spectroscopy**, *Surface Science* **173**, No. 2-3, 395-410 (1986).

H. Ito, S. A. MacDonald, C. G. Willson (IBM Corporation, 650 Harry Road, San Jose, CA 95120), J. W. Moore, H. M. Gharapetian, and J. E. Guillet (University of Toronto, Ontario, Canada), **Reactivity and Polymerization of Isopropenyl *tert*-Butyl Ketone: A Twisted α , β -Unsaturated Enone**, *Macromolecules* **19**, No. 7, 1839-1844 (1986).

J

H. Jaeckel (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), V. Graf, B. J. Vanzeghh, P. Vettiger, and P. Wolf (IBM, Zurich, Switzerland), **Scaled GaAs MESFET's with Gate Length Down to 100 nm**, *IEEE Electron Device Letters* **EDL-7**, No. 9, 522-524 (1986).

K

S. B. Kaplan and A. C. Warren (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Magnetoconductance Oscillations of a Quasi-One-Dimensional Electron Gas in a Parabolic Transverse Potential**, *Physical Review B* **34**, No. 2, 1346-1348 (1986).

T. Karis (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Electronic Measurement of Single-Domain Magnetic Particle Concentration**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 665-667 (1986).

T. E. Karis (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and M. S. Jhon (Carnegie-Mellon University, Pittsburgh, PA), **Flow Induced Anisotropy in the Susceptibility of a Particle Suspension**, *Proceedings of the National Academy of Sciences of the United States of America* **83**, No. 14, 4973-4977 (1986).

U. O. Karlsson, F. J. Himpsel, J. F. Morar, F. R. McFeely, D. Rieger, and J. A. Yarmoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Formation of a New Ordered Structure of $\text{CaF}_2/\text{Si}(111)$ by Ultraviolet Irradiation**, *Physical Review Letters* **57**, No. 10, 1247-1250 (1986).

U. O. Karlsson, F. J. Himpsel, J. F. Morar, D. Rieger, J. A. Yarmoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electronic Structure of Molecular Beam Epitaxy Grown CaF_2 on Si(111)**, *Journal of Vacuum Science and Technology B* **4**, No. 4, 1117-1120 (1986).

A. J. Karn, S. M. Arakelian, Y. R. Shen (University of California, Berkeley, CA 94720), and H. L. Ong (IBM, Yorktown Heights, NY), **Observation of Magnetic-Field Induced First-Order Optical Fréedericksz Transition in a Nematic Film**, *Physical Review Letters* **57**, No. 4, 448-451 (1986).

P. H. Kasai and P. M. Jones (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Cu, Ag, and Au Atom-Molecular Oxygen Complexes: Matrix Isolation ESR Study**, *Journal of Physical Chemistry* **90**, No. 18, 4239-4245 (1986).

P. Kasiraj, R. M. Shelby, J. S. Best, and D. E. Horne (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Magnetic Domain Imaging with a Scanning Kerr Effect Microscope**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 837-839 (1986).

U. Keppler (IBM Deutschland GmbH, Postfach 226, D-7032 Sindelfingen, Federal Republic of Germany), **Thermal Expansion and Critical Temperature of Superconducting Metals**, *Zeitschrift für Metallkunde* **77**, No. 8, 519-521 (1986).

R. W. Keyes (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Comment on "Bolometric Detection of Neutrinos,"** *Physical Review Letters* **57**, No. 5, 648 (1986).

R. F. Kiefl, W. Odermatt, H. Baumeler, J. Felber, H. Keller, W. Kündig, P. F. Meier, B. D. Patterson, J. W. Schneider (University of Zurich, 8001 Zurich, Switzerland), K. W. Blazey (IBM, Zurich, Switzerland), and T. L. Estle (Rice University, Houston, TX), **Muonium Centers in the Cuprous Halides**, *Physical Review B* **34**, No. 3, 1474-1484 (1986).

K. M. Kim and P. Smetana (IBM Corporation, East Fishkill facility, Hopewell Junction, NY 12533), **Oxygen Segregation in CZ Silicon Crystal Growth on Applying a High Axial Magnetic Field**, *Journal of the Electrochemical Society* **133**, No. 8, 1682-1686 (1986).

K. S. Kim (IBM Corporation, Mail Station 428, Neighborhood Road, Kingston, NY 12401), D. P. Vercauteren, M. Welti, S. L. Fornili (National Foundation for Cancer Research, Bethesda, MD), and E. Clementi (IBM, Kingston, NY), **Interaction of Na⁺ Ion with the Solvated Gramicidin-A Transmembrane Channel**, *Croatica Chemica Acta* **59**, No. 2, 369-381 (1986).

J. R. Kirtley, Z. Schlesinger, T. N. Theis, F. P. Milliken, S. L. Wright, and L. F. Palmateer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Low-Voltage Breakdown of the Quantum Hall State in a Laterally Constricted Two-Dimensional Electron Gas**, *Physical Review B* **34**, No. 2, 1384-1387 (1986).

I. C. Kizilyalli, K. Hess (University of Illinois, Urbana, IL 61810), J. L. Larson (IBM, Hopewell Junction, NY), and D. J. Widiger (Cray Research, Inc., Chippewa Falls, WI), **Scaling Properties of High Electron Mobility Transistors**, *IEEE Transactions on Electron Devices* **ED-33**, No. 10, 1427-1433 (1986).

K. B. Klaassen and J. C. L. Van Peppen (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Reliability in Instrumentation**, *Journal of Physics E* **19**, No. 8, 577-587 (1986).

T. R. Koehler (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Mapping Procedure to Match Hysteresis Loops from Models to Experimental Results**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 1055-1056 (1986).

E. Konar (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), A. I. Kraut, and W. Wong (IBM, Armonk, NY), **Computer Literacy: With Ask You Shall Receive**, *Personnel Journal* **65**, No. 7, 83+ (1986).

G. Koren (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ar Ion Laser Assisted Chemical Etching of Via Holes in Tungsten Sheets in Air**, *Applied Physics A* **40**, No. 4, 215-217 (1986).

L. Krusin-Elbaum (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Dependence of the Flatband Voltage of Si-MOS on Distribution of Cesium in SiO₂, Comparison of Two Implantation Methods**, *Journal of the Electrochemical Society* **133**, No. 8, 1712-1715 (1986).

K. Kunimatsu, H. Seki, W. G. Golden, J. G. Gordon, and M. R. Philpott (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Carbon-Monoxide Adsorption on a Platinum Electrode Studied by Polarization Modulated FT-IR Reflection Absorption Spectroscopy. II. CO Adsorbed at a Potential in the Hydrogen Region and Its Oxidation in Acids**, *Langmuir* **2**, No. 4, 464-468 (1986).

L

F.-S. J. Lai, L. K. Wang, Y. Taur, J. Y.-C. Sun, K. E. Petrillo, S. K. Chicotka, E. J. Petrillo, M. R. Polcari, T. J. Bucelot, and D. S. Zicherman (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Highly Latchup-Immune 1-μm CMOS Technology Fabricated with 1-MeV Ion Implantation and Self-Aligned TiSi₂**, *IEEE Transactions on Electron Devices* **ED-33**, No. 9, 1308-1320 (1986).

R. Landauer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Computation and Physics: Wheeler's Meaning Circuit**, *Foundations of Physics* **16**, No. 6, 551-564 (1986).

N. D. Lang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), J. K. Norskov (NORDITA, Copenhagen, Denmark), and B. I. Lundqvist (Chalmers University of Technology, Gothenberg, Sweden), **Calculated Diabatic Atom Surface Potential Energy Curves**, *Physica Scripta* **34**, No. 1, 77-83 (1986).

R. B. Lauffer, T. J. Brady (Massachusetts General Hospital, Boston, MA 02114), R. D. Brown III, C. Baglin, and S. H. Koenig (IBM, Yorktown Heights, NY), **1/T, NMRD Profiles of Solutions of Mn²⁺ and Gd³⁺ Protein-Chelate Conjugates**, *Magnetic Resonance in Medicine* **3**, No. 4, 541-548 (1986).

C. C. Lee, D. T. Lee (Northwestern University, Evanston, IL 60201), and C. K. Wong (IBM, Yorktown Heights, NY), **Generating Binary Trees of Bounded Height**, *Acta Informatica* **23**, No. 5, 529-544 (1986).

F. K. LeGoues (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), T. L. McDevitt, and H. I. Aaronson (Carnegie-Mellon University, Pittsburgh, PA), **Critique of "Atom Probe Field Ion Microscopy of the Decomposition of Cu-2.7 A/O Co,"** *Scripta Metallurgica* **20**, No. 9, 1305-1310 (1986).

B. Leroy (IBM France, B.P. 58, 91102 Corbeil-Essonnes, France), **Silicon Wafers for Integrated Circuit Process**, *Revue de Physique Appliquée* **21**, No. 8, 467-488 (1986).

J. R. Lloyd (IBM Corporation, East Fishkill facility, Hopewell Junction, NY 12533) and R. N. Steagall (IBM, Hopewell Junction, NY), **Activation Energy for Electromigration Failure in Al-Cu Conductor Stripes Covered with Polyimide**, *Journal of Applied Physics* **60**, No. 3, 1235-1237 (1986).

M

M. Maglione (Ecole Polytechnique Fédérale Lausanne, CH-1015 Lausanne, Switzerland), U. T. Hochli (IBM, Zurich, Switzerland), and J. Joffrin (University of Orsay, Orsay, France), **Dipolar Glass State in $K_{1-x}Na_xTaO_3$** , *Physical Review Letters* **57**, No. 4, 436-439 (1986).

A. P. Malozemoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Anisotropic Magnetoresistance with Cubic Anisotropy and Weak Ferromagnetism: A New Paradigm**, *Physical Review B* **34**, No. 3, 1853-1863 (1986).

W. Malzfeldt, P. M. Horn, D. P. DiVincenzo, B. Stephenson, R. Gambino, and S. Herd (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Structure Studies of Aluminum Based Quasicrystals**, *Journal d'Physique* **47**, No. C-3, 379-387 (1986).

R. H. McCamis, T. N. Nasr, J. Birchall, N. E. Davison, W. T. H. van Oers, P. J. Verheijen (University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2), R. F. Carlson, A. J. Cox (University of Redlands, Redlands, CA), B. C. Clark (Ohio State University, Columbus), E. D. Cooper (TRIUMF, Vancouver, Canada), S. Hama (Florida State University, Tallahassee, FL), and R. L. Mercer (IBM, Yorktown Heights, NY), **Elastic Scattering of Protons from $^{40,42,44,46}Ca$ from 20 to 50 MeV and Nuclear Matter Radii**, *Physical Review C* **33**, No. 5, 1624-1633 (1986).

T. W. McDaniel (IBM Corporation, Tucson, AZ 85744) and D. C. Palmer (IBM, Rochester, MN), **Side Reading Response of Ferrite Inductive Heads**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 850-852 (1986).

T. R. McGuire (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and M. Hartmann (Philips Research Laboratories, Hamburg, Federal Republic of Germany), **Magneto-Optic Properties of Amorphous Tb-Co Films**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 1224-1226 (1986).

C. McMullen (Harvard University, Cambridge, MA 02139) and J. Shearer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Prime Implicants, Minimum Covers, and the Complexity of Logic Simplification**, *IEEE Transactions on Computers* **C-35**, No. 8, 761-762 (1986).

N. Megiddo (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Note on Degeneracy in Linear Programming**, *Mathematical Programming* **35**, No. 3, 365-367 (1986).

N. Megiddo (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and E. Zemel (Northwestern University, Evanston, IL), **An $O(n \log n)$ Randomizing Algorithm for the Weighted Euclidean 1-Center Problem**, *Journal of Algorithms* **7**, No. 3, 358-368 (1986).

E. E. Mendez (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electronic Mobility in Semiconductor Heterostructures**, *IEEE Journal of Quantum Electronics* **QE-22**, No. 9, 1720-1727 (1986).

V. S. Miller (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Use of Elliptic Curves in Cryptography**, *Lectures on Computer Science* **218**, 417-426 (1986).

S. E. Millman, R. F. Hoyt, D. E. Horne, and B. Beye (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Motion Pictures of In-Situ Air Bearing Dynamics**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 1031-1033 (1986).

M. Mirzamaani (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and R. Weil (Stevens Institute of Technology, Hoboken, NJ), **Relationships Between the Structure and Some Electrochemical Properties of Electrodeposited Copper**, *Plating and Surface Finishing* **73**, No. 8, 96-100 (1986).

R. Mock (University of Cologne, 5000 Cologne 4, Federal Republic of Germany), E. Zirngiebl, B. Hillebrands, G. Guntherodt, and F. Holtzberg (IBM, Yorktown Heights, NY), **Experimental Identification of Charge Relaxation Rates in Intermediate Valence Compounds by Phonon Spectroscopy**, *Physical Review Letters* **57**, No. 8, 1040-1043 (1986).

T. N. Morgan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Theory of the DX Center in $Al_{1-x}Ga_xAs$ and GaAs Crystals**, *Physical Review B* **34**, No. 4, 2664-2669 (1986).

V. L. Moruzzi, P. M. Marcus (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), K. Schwarz, and P. Mohn (Technical University of Vienna, Austria), **Ferromagnetic Phases of bcc and fcc Fe, Co, and Ni**, *Physical Review B* **34**, No. 3, 1784-1791 (1986).

P. K. Mpherson (City University of London, Northampton Square, London EC1V 0HB, England), R. T. Beaty (IBM United Kingdom Ltd., Strathclyde, England), K. J. Rawson (University of West London, Surrey, England), N. Francis (British Petr Int. Ltd., London, England), M. J. Whitmarshveriss (Cent Elect Generating Board, Barnwood, England), D. K. Hitchinson (Racal Def Syst Ltd., Hants, England), and A. Chandler (Logica Energy & Ind Syst. Ltd., London, England), **Discussion on IEE Colloquium on Systems Engineering: Its Nature and Scope**, *IEE Proceedings A* **133**, No. 6, 358-359 (1986).

P. K. Mpherson (City University of London, Northampton Square, London EC1V 0HB, England), R. T. Beaty (IBM United Kingdom Ltd., Strathclyde, England), K. J. Rawson (University of West London, Surrey, England), N. Francis (British Petr Int. Ltd., London, England), M. J. Whitmarshveriss (Cent Elect Generating Board, Barnwood, England), D. K. Hitchinson (Racal Def Syst Ltd., Hants, England), and A. Chandler (Logica Energy & Ind Syst. Ltd., London, England), **Systems Engineering: Its Nature and Scope**, *IEE Proceedings A* **133**, No. 6, 329 (1986).

K. A. Müller (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Microscopic Investigations of the Ferroelectric Phase Transitions in $BaTiO_3$ by Paramagnetic Resonance**, *Helvetica Physica Acta* **59**, No. 5, 874-884 (1986).

M. Murakami (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), K. D. Childs (IBM, Hopewell Junction, NY), J. M. Baker, and A. Callegari (IBM, Yorktown Heights, NY), **Microstructure Studies of AuNiGe Ohmic Contacts to n-Type GaAs**, *Journal of Vacuum Science and Technology B* **4**, No. 4, 903-911 (1986).

S. Muro (Kyoto University, Kyoto 606, Japan), T. Mizutani (IBM Japan, Fujisawa), and T. Hasegawa (Kyoto University, Japan), **Multiversion Concurrency Control Scheme for a Distributed Database System: A Trial to Break Concurrent Update of Redundant Copies**, *Lecture Notes in Computer Science* **220**, 158-180 (1986).

M

M. Maglione (Ecole Polytechnique Fédérale Lausanne, CH-1015 Lausanne, Switzerland), U. T. Hochli (IBM, Zurich, Switzerland), and J. Joffrin (University of Orsay, Orsay, France), **Dipolar Glass State in $K_{1-x}Na_xTaO_3$** , *Physical Review Letters* **57**, No. 4, 436-439 (1986).

A. P. Malozemoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Anisotropic Magnetoresistance with Cubic Anisotropy and Weak Ferromagnetism: A New Paradigm**, *Physical Review B* **34**, No. 3, 1853-1863 (1986).

W. Malzfeldt, P. M. Horn, D. P. DiVincenzo, B. Stephenson, R. Gambino, and S. Herd (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Structure Studies of Aluminum Based Quasicrystals**, *Journal d'Physique* **47**, No. C-3, 379-387 (1986).

R. H. McCamis, T. N. Nasr, J. Birchall, N. E. Davison, W. T. H. van Oers, P. J. Verheijen (University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2), R. F. Carlson, A. J. Cox (University of Redlands, Redlands, CA), B. C. Clark (Ohio State University, Columbus), E. D. Cooper (TRIUMF, Vancouver, Canada), S. Hama (Florida State University, Tallahassee, FL), and R. L. Mercer (IBM, Yorktown Heights, NY), **Elastic Scattering of Protons from $^{40,42,44,46}Ca$ from 20 to 50 MeV and Nuclear Matter Radii**, *Physical Review C* **33**, No. 5, 1624-1633 (1986).

T. W. McDaniel (IBM Corporation, Tucson, AZ 85744) and D. C. Palmer (IBM, Rochester, MN), **Side Reading Response of Ferrite Inductive Heads**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 850-852 (1986).

T. R. McGuire (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and M. Hartmann (Philips Research Laboratories, Hamburg, Federal Republic of Germany), **Magneto-Optic Properties of Amorphous Tb-Co Films**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 1224-1226 (1986).

C. McMullen (Harvard University, Cambridge, MA 02139) and J. Shearer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Prime Implicants, Minimum Covers, and the Complexity of Logic Simplification**, *IEEE Transactions on Computers* **C-35**, No. 8, 761-762 (1986).

N. Megiddo (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Note on Degeneracy in Linear Programming**, *Mathematical Programming* **35**, No. 3, 365-367 (1986).

N. Megiddo (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and E. Zemel (Northwestern University, Evanston, IL), **An $O(n \log n)$ Randomizing Algorithm for the Weighted Euclidean 1-Center Problem**, *Journal of Algorithms* **7**, No. 3, 358-368 (1986).

E. E. Mendez (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electronic Mobility in Semiconductor Heterostructures**, *IEEE Journal of Quantum Electronics* **QE-22**, No. 9, 1720-1727 (1986).

V. S. Miller (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Use of Elliptic Curves in Cryptography**, *Lectures on Computer Science* **218**, 417-426 (1986).

S. E. Millman, R. F. Hoyt, D. E. Horne, and B. Beye (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Motion Pictures of In-Situ Air Bearing Dynamics**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 1031-1033 (1986).

M. Mirzamaani (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and R. Weil (Stevens Institute of Technology, Hoboken, NJ), **Relationships Between the Structure and Some Electrochemical Properties of Electrodeposited Copper**, *Plating and Surface Finishing* **73**, No. 8, 96-100 (1986).

R. Mock (University of Cologne, 5000 Cologne 4, Federal Republic of Germany), E. Zirngiebl, B. Hillebrands, G. Guntherodt, and F. Holtzberg (IBM, Yorktown Heights, NY), **Experimental Identification of Charge Relaxation Rates in Intermediate Valence Compounds by Phonon Spectroscopy**, *Physical Review Letters* **57**, No. 8, 1040-1043 (1986).

T. N. Morgan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Theory of the DX Center in $Al_{1-x}Ga_xAs$ and GaAs Crystals**, *Physical Review B* **34**, No. 4, 2664-2669 (1986).

V. L. Moruzzi, P. M. Marcus (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), K. Schwarz, and P. Mohn (Technical University of Vienna, Austria), **Ferromagnetic Phases of bcc and fcc Fe, Co, and Ni**, *Physical Review B* **34**, No. 3, 1784-1791 (1986).

P. K. Mpherson (City University of London, Northampton Square, London EC1V 0HB, England), R. T. Beaty (IBM United Kingdom Ltd., Strathclyde, England), K. J. Rawson (University of West London, Surrey, England), N. Francis (British Petr Int. Ltd., London, England), M. J. Whitmarshveriss (Cent Elect Generating Board, Barnwood, England), D. K. Hitchinson (Racal Def Syst Ltd., Hants, England), and A. Chandler (Logica Energy & Ind Syst. Ltd., London, England), **Discussion on IEE Colloquium on Systems Engineering: Its Nature and Scope**, *IEE Proceedings A* **133**, No. 6, 358-359 (1986).

P. K. Mpherson (City University of London, Northampton Square, London EC1V 0HB, England), R. T. Beaty (IBM United Kingdom Ltd., Strathclyde, England), K. J. Rawson (University of West London, Surrey, England), N. Francis (British Petr Int. Ltd., London, England), M. J. Whitmarshveriss (Cent Elect Generating Board, Barnwood, England), D. K. Hitchinson (Racal Def Syst Ltd., Hants, England), and A. Chandler (Logica Energy & Ind Syst. Ltd., London, England), **Systems Engineering: Its Nature and Scope**, *IEE Proceedings A* **133**, No. 6, 329 (1986).

K. A. Müller (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Microscopic Investigations of the Ferroelectric Phase Transitions in $BaTiO_3$ by Paramagnetic Resonance**, *Helvetica Physica Acta* **59**, No. 5, 874-884 (1986).

M. Murakami (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), K. D. Childs (IBM, Hopewell Junction, NY), J. M. Baker, and A. Callegari (IBM, Yorktown Heights, NY), **Microstructure Studies of AuNiGe Ohmic Contacts to n-Type GaAs**, *Journal of Vacuum Science and Technology B* **4**, No. 4, 903-911 (1986).

S. Muro (Kyoto University, Kyoto 606, Japan), T. Mizutani (IBM Japan, Fujisawa), and T. Hasegawa (Kyoto University, Japan), **Multiversion Concurrency Control Scheme for a Distributed Database System: A Trial to Break Concurrent Update of Redundant Copies**, *Lecture Notes in Computer Science* **220**, 158-180 (1986).

J. P. Muscat (Université de Lausanne, 1015 Lausanne, Switzerland) and I. P. Batra (IBM, Rüschlikon, Switzerland), **Coverage Dependence of the Work Function of Metals upon Alkali-Metal Adsorption**, *Physical Review B* **34**, No. 4, 2889-2892 (1986).

K. P. Muthig (University of Tübingen, Wissenschaftszentrum Heidelberg, D-6900 Heidelberg, Federal Republic of Germany) and R. Ulrich (IBM Deutschland, Zentrum, Wissenschaft), **Primary Establishment of Tracing Areas in Short-Term-Memory (KZG)**, *Zeitschrift für Psychologie* **194**, No. 1, 63-72 (1986).

N

F. Nava, O. Bisi (Dipartimento di Fisica Via Campi 213 A, Modena, Italy), P. Psaras, H. Takai, and K. N. Tu (IBM, Yorktown Heights, NY), **Electrical Characterization of Alloy Thin Films of VSi_2 and V_3Si** , *Thin Solid Films* **140**, No. 1, 167-172 (1986).

R. K. Nesbet (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Nonperturbative Theory of Exchange and Correlation in One-Electron Quasiparticle States**, *Physical Review B* **34**, No. 3, 1526-1538 (1986).

S. W. Ng (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Reliability & Availability of Duplex Systems: Some Simple Models**, *IEEE Transactions on Reliability* **R-35**, No. 3, 295-300 (1986).

J. M. Nicholls, F. Salvan, and B. Reihl (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Surface States of Ordered Au, Ag, and Cu Overlayers on Si(111) Studied by Inverse Photoemission**, *Physical Review B* **34**, No. 4, 2945-2948 (1986).

V. Novotny (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Electrical Conduction in Surfactant-Water-Nonaqueous Liquid Systems**, *Journal of the Electrochemical Society* **133**, No. 8, 1629-1636 (1986).

P

J. Pacansky, R. J. Waltman, and C. Wang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Irradiation of Poly(perfluoropropylene Oxide) by a 175 kV Electron Beam: The Formation and Hydrolysis of Acid Fluoride Groups**, *Journal of Fluorine Chemistry* **32**, No. 3, 283-297 (1986).

E. J. Pakulis (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Observation of Switching and Narrow-Band Noise in the Condensed Phase of a $\text{GaAs}/\text{Ga}_{0.77}\text{Al}_{0.23}\text{As}$ Heterojunction**, *Physical Review Letters* **57**, No. 5, 615-618 (1986).

S. S. P. Parkin (IBM Corporation, 650 Harry Road, San Jose, CA 95120), M. Miljak, and J. R. Cooper (Institute of Physics of the University Zagreb, Yugoslavia), **Magnetic Susceptibility and ESR of the Organic Conductor Bis(Ethylenedithiolo) Tetrathiafulvalene Perchlorate $[(\text{BEDT-TTF})_2(\text{ClO}_4)_2]$: Evidence for a Peierls Transition**, *Physical Review B* **34**, No. 3, 1485-1488 (1986).

C. K. Peng, A. Ketterson, H. Morkoç (University of Illinois, 1101 W. Springfield Avenue, Urbana, IL 61801), and P. M. Solomon (IBM, Yorktown Heights, NY), **Determination of the Conduction-Band Discontinuity Between $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}/\text{In}_{0.52}\text{Al}_{0.48}\text{As}$ Using $n^+\text{-InGaAs}/\text{InAlAs}/n^-\text{-InGaAs}$ Capacitors**, *Journal of Applied Physics* **60**, No. 5, 1709-1712 (1986).

C. A. Pickover (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **On the Use of Symmetrized Dot Patterns for the Visual Characterization of Speech Waveforms and Other Sampled Data**, *Journal of Acoustical Society of America* **80**, No. 3, 955-960 (1986).

S. Pilpel (IBM Israel, Scientific Center, Technion City, Haifa 32000, Israel), **Generalized S-Shapedness of Reliability Functions**, *Mathematics of Operations Research* **11**, No. 3, 433-441 (1986).

P. M. Postal (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Why Irish Raising Is Not Anomalous**, *Natural Language and Linguistic Theory* **4**, No. 3, 333-356 (1986).

P. J. Price (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Calculation of Electron Propagation in Heterostructures, Superlattices and Microstructures** **2**, No. 3, 213-218 (1986).

E. Pytte (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Monte Carlo Study of Ising Spin Dynamics on a Fractal Lattice**, *Physical Review B* **34**, No. 3, 2060-2063 (1986).

R

B. D. Ramsey (IBM Corporation, Tucson, AZ 85744), **The Lion and the Unicorn Meet PROLOG**, *ACM Sigplan Notices* **21**, No. 8, 62-70 (1986).

D. C. Rapaport and E. Clementi (IBM Corporation, Kingston, NY 12401), **Eddy Formation in Obstructed Fluid Flow: A Molecular-Dynamics Study**, *Physical Review Letters* **57**, No. 6, 695-698 (1986).

W. Reim, R. H. Koch, A. P. Malozemoff, M. B. Ketchen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and H. Maletta (Institut für Festkörperforschung der Kernforschungsanlage, Jülich, Federal Republic of Germany), **Magnetic Equilibrium Noise in Spin-Glasses: $\text{Eu}_{0.4}\text{Sr}_{0.6}\text{S}$** , *Physical Review Letters* **57**, No. 7, 905-908 (1986).

J. Rissanen (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Complexity of Strings in the Class of Markov Sources**, *IEEE Transactions on Information Theory* **IT-32**, No. 4, 526-532 (1986).

C. J. Robinson (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Multilayer Films of CoCrTa for Perpendicular Recording Media**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 328-330 (1986).

G. A. Rodríguez, R. M. Hart, A. J. Sievers, F. Keilmann (Max-Planck-Institut für Festkörperforschung, 7000 Stuttgart 80, Federal Republic of Germany), Z. Schlesinger, S. L. Wright, and W. I. Wang (IBM, Yorktown Heights, NY), **Intensity-Dependent Cyclotron Resonance in a $\text{GaAs}/\text{GaAlAs}$ Two-Dimensional Electron Gas**, *Applied Physics Letters* **49**, No. 8, 458-460 (1986).

Z. Rosberg and I. S. Gopal (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Optimal Hop-by-Hop Flow Control in Computer Networks**, *IEEE Transactions on Automatic Control* **AC-31**, No. 9, 813-822 (1986).

S

G. A. Sai-Halasz and H. B. Harrison (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Device-Grade Ultra-Shallow Junctions Fabricated with Antimony**, *IEEE Electron Device Letters* **EDL-7**, No. 9, 534-536 (1986).

J. E. Sammet (IBM Corporation, 6600 Rockledge Drive, Bethesda, MD 20817), **Why Ada Is Not Just Another Programming Language**, *Communications of the ACM* **29**, No. 8, 722-732 (1986).

D. D. Saperstein (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Infrared Spectroscopy of Reversibly Adsorbed Gases Held by Activated Carbon**, *Journal of Physical Chemistry* **90**, No. 17, 3883-3885 (1986).

R. P. Saxon (SRI International, Menlo Park, CA 94025) and B. Liu (IBM, San Jose, CA), **Theoretical Study of OH⁺: Potential Curves, Transition Moments, and Photodissociation Cross Sections**, *Journal of Chemical Physics* **85**, No. 4, 2099-2104 (1986).

J. R. Schackelford III (IBM Corporation, Nashville, TN), **Voluntary DP Certification Has Come of Age**, *Data Management* **24**, No. 8, 12-14 (1986).

T. E. Schlesinger (Carnegie-Mellon University, Pittsburgh, PA 15213) and T. Kuech (IBM, Yorktown Heights, NY), **Determination of the Interdiffusion of Al and Ga in Undoped (Al,Ga)As/GaAs Quantum Wells**, *Applied Physics Letters* **49**, No. 9, 519-521 (1986).

D. Schmeisser (Han-Meitner-Institut für Kernforschung Berlin, D-1000 Berlin 39, Federal Republic of Germany), R. D. Schnell, A. Bogen, F. J. Himpsel, D. Rieger (University of Munich, Federal Republic of Germany), G. Landgren, and J. F. Morar (IBM, Yorktown Heights, NY), **Surface Oxidation States of Germanium**, *Surface Science* **172**, No. 2, 455-465 (1986).

D. Schmeltzer (IBM Israel, Scientific Center, Technion City, 32000 Haifa, Israel), **Coexistence of Superconductivity and Sinusoidal (Helical) Magnetic Order**, *Physica Status Solidi B* **136**, No. 1, 349-364 (1986).

W. Schmickler (University of Bonn, Institute of Physical Chemistry, Wegelerstrasse 12, D-5300 Bonn, Federal Republic of Germany) and D. Henderson (IBM, San Jose, CA), **The Interphase Between Jellium and a Hard Sphere Electrolyte: Capacity-Charge Characteristics and Dipole Potentials**, *Journal of Chemical Physics* **85**, No. 3, 1650-1657 (1986).

T. Schneider, A. Politi (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), and R. Badii (University of Zurich, Switzerland), **Relationship Between Classical Diffusion, Intermittency, and the Motion of a Quantum Particle in Modulated or Random Media**, *Physical Review A* **34**, No. 3, 2505-2508 (1986).

T. Schneider, M. P. Soerensen, E. Tosatti, and M. Zannetti (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Relationship Between Classical Diffusion, $1/\omega$ Noise and the Motion of a Quantum Particle**, *Europhysics Letters* **2**, No. 3, 167-174 (1986).

K. Schwarz (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **CrO₂ Predicted as a Half Metallic Ferromagnet**, *Journal of Physics F* **16**, No. 9, L211-L215 (1986).

I. Seginer, A. Angel (Technion-Israel Institute of Technology, Haifa, Israel), S. Gal (IBM Israel, Scientific Center, Haifa, Israel), and D. Kantz (Technion, Haifa, Israel), **Optimal CO₂ Enrichment Strategy for Greenhouses: A Simulation Study**, *Journal of Agricultural Engineering Research* **34**, No. 4, 285-304 (1986).

J. B. Shearer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Lower Bounds for Small Diagonal Ramsey Numbers**, *Journal of Combinatorial Theory A* **42**, No. 2, 302-304 (1986).

R. M. Shelby, M. D. Levenson, S. H. Perlmuter, R. G. DeVoe, and W. F. Walls (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Broad-Band Parametric Deamplification of Quantum Noise in an Optical Fiber**, *Physical Review Letters* **57**, No. 6, 691-694 (1986).

L. T. Shi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Dislocation-like Defects in an Amorphous Lennard-Jones Solid**, *Materials Science and Engineering* **81**, No. 1-2, 509-514 (1986).

N. S. Shiren, R. L. Melcher, and T. G. Kazyaka (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Multiple-Quantum Phase Conjugation in Microwave Acoustics**, *IEEE Journal of Quantum Electronics* **QE-22**, No. 8, 1457-1460 (1986).

T. P. Smith III, W. I. Wang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and P. J. Stiles (Brown University, Providence, RI), **Two-Dimensional Density of States in the Extreme Quantum Limit**, *Physical Review B* **34**, No. 4, 2995-2998 (1986).

J. M. Soler, A. M. Baro, N. Garcia (Universidad Autónoma de Madrid, 28049 Madrid, Spain), and H. Rohrer (IBM, Zurich, Switzerland), **Interatomic Forces in Scanning Tunneling Microscopy: Giant Corrugations of the Graphite Surface**, *Physical Review Letters* **57**, No. 4, 444-447 (1986).

E. Spiller and A. E. Rosenbluth (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Determination of Thickness Errors and Boundary Roughness from the Measured Performance of a Multilayer Coating**, *Optical Engineering* **25**, No. 8, 954-963 (1986).

P. Spirito, C. M. Ransom, and G. S. Oehrlein (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Schottky Diode Analysis for Evaluation of RIE Effects on Silicon Surfaces**, *Solid State Electronics* **29**, No. 6, 607-611 (1986).

J. C. Suits, R. H. Geiss, C. J. Lin, D. Rugar, and A. E. Bell (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Lorentz Microscopy of Micron-Sized Laser-Written Magnetic Domains in TbFe**, *Applied Physics Letters* **49**, No. 7, 419-421 (1986).

J. Y. C. Sun, M. R. Wordeman, and S. E. Laux (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **On the Accuracy of Channel Length Characterization of Idd Mosfets**, *IEEE Transactions on Electron Devices* **ED-33**, No. 10, 1556-1562 (1986).

T

Y.-S. Tang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Noise Autocorrelation in High Density Recording on Metal Film Disks**, *IEEE Transactions on Magnetics* **MAG-22**, No. 5, 883-885 (1986).

J. Tersoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Anomalous Corrugations in Scanning Tunneling Microscopy: Imaging of Individual States**, *Physical Review Letters* **57**, No. 4, 440-443 (1986).

P. A. Thiry, M. Liehr, J. J. Pireaux, R. Caudano, P. Lambin, J. P. Vigneron, A. A. Lucas (Facultés Universitaires Notre-Dame de la Paix, B-500 Namur, Belgium), and T. Kuech (IBM, Yorktown Heights, NY), **Surface and Interface Optical Phonons of a GaAs-AlGaAs Superlattice Measured by High Resolution Electron Energy Loss Spectroscopy**, *Journal of Vacuum Science and Technology B* 4, No. 4, 1028-1032 (1986).

J. E. Trent (IBM Corporation, Research Triangle Park, NC), **An Approach to Supplier Quality Improvement**, *IEEE Communications Magazine* 24, No. 8, 44-47 (1986).

R. M. Tromp, R. J. Hamers, and J. E. Demuth (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Atomic and Electronic Contributions to Si(111)-(7×7) Scanning-Tunneling-Microscopy Images**, *Physical Review B* 34, No. 2, 1388-1391 (1986).

K. N. Tu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Contact for Shallow Junctions**, *Thin Solid Films* 140, No. 1, 71-78 (1986).

Y

H. R. Van As (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Transient Analysis of Markovian Queueing Systems and Its Application to Congestion-Control Modeling**, *IEEE Journal of Selected Areas in Communications SPC-4*, No. 6, 891-904 (1986).

W

W. I. Wang, E. E. Mendez, Y. Iye (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), B. Lee, M. H. Kim, and G. E. Stillman (University of Illinois, Urbana, IL), **High Mobility Two-Dimensional Hole Gas in an $\text{Al}_{0.26}\text{Ga}_{0.74}\text{As}/\text{GaAs}$ Heterojunction**, *Journal of Applied Physics* 60, No. 5, 1834-1835 (1986).

B. Z. Weiss, K. N. Tu, and D. A. Smith (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **$\text{Cr}_{72}\text{Si}_{28}$ Thin Films Temperature Dependence of Electrical Properties of Microstructure**, *Acta Metallurgica* 34, No. 8, 1491-1504 (1986).

J. Werner (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), K. Ploog, and H. J. Queisser (Max-Planck-Institut für Festkörperforschung, Stuttgart, Federal Republic of Germany), **Interface State Measurements at Schottky Contacts: A New Admittance Technique**, *Physical Review Letters* 57, No. 8, 1080-1083 (1986).

C. H. West (IBM Corporation, Research Laboratory, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **A Validation of the OSI Session Layer Protocol**, *Computer Networks and ISDN Systems* 11, No. 3, 173-182 (1986).

C. C. Williams and H. K. Wickramasinghe (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Optical Ranging by Wavelength Multiplexed Interferometry**, *Journal of Applied Physics* 60, No. 6, 1900-1903 (1986).

J. K. Wolf (University of California at San Diego, La Jolla, CA 92093) and G. Ungerboeck (IBM, Zurich, Switzerland), **Trellis Coding for Partial Response Channels**, *IEEE Transactions on Communications COM-34*, No. 8, 765-773 (1986).

D. J. Wolford, T. F. Kuech, J. A. Bradley (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), M. A. Gell, D. Ninno, and M. Jaros (The University, Newcastle upon Tyne, United Kingdom), **Pressure-Dependence of GaAs/ $\text{Al}_x\text{Ga}_{1-x}\text{As}$ Quantum-Well Bound States: The Determination of Valence-Band Offsets**, *Journal of Vacuum Science and Technology B* 4, No. 4, 1043-1050 (1986).

L. S. Woo, C. K. Wong, and D. T. Tang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Pioneer: A Macro-Based Floor-Planning Design System**, *Physical Review Letters* 7, No. 8, 32+ (1986).

Y

E. J. Yarmchuk (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Spatial Structure of Media Noise in Film Disks**, *IEEE Transactions on Magnetics MAG-22*, No. 5, 877-882 (1986).

C. E. Yeack-Scranton (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Novel Piezoelectric Transducers to Monitor Head-Disk Interactions**, *IEEE Transactions on Magnetics MAG-22*, No. 5, 1011-1016 (1986).

Z

A. E. Zachariades (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Crystalline Morphology of Ultrahigh Molecular Weight Polyethylene Pseudogels**, *Journal of Applied Polymer Science* 32, No. 3, 4277-4279 (1986).